MOBILETRON™

Multi-function Rearview Mirror

One mirror with dual functions

Installation and Operation Instructions

For R603, R603A & R603B

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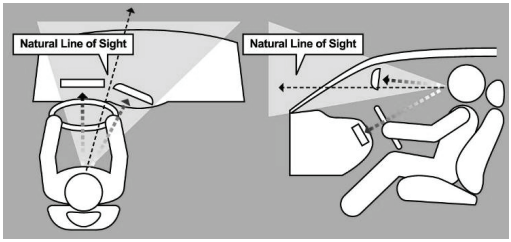
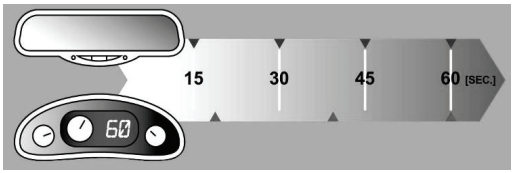
1. Introduction

Congratulations on purchasing a high quality Mobiletron Rearview Monitor System. This high quality rearview monitor isn't just a mirror monitor; it can also be integrated into your vehicle entertainment system, to act as the main display. The Mobiletron mirror also displays the outside temperature and has a compass reading. It doesn't take any extra space on your windscreen; it just replaces your original rear view mirror.
Mobiletron's material science research department has developed a special coating for mirrors. This means that when you are driving forward you can't see the LCD screen. This means the mirror loses none of its efficacy during normal driving.

For a rearview mirror to give the driver crucial awareness of other vehicles proximity, it is important that it is positioned correctly



Viewing a well placed rear view mirror requires minimal eye movement.



Data by the Japanese Insurance Association shows that drivers view their interior rear view mirror at least every 15 seconds; or 4 times per minute. They view their instrument panel less often at 3 times a minute.

2. Caution

The product is intended to assist in safe driving and enable the driver to have a clear rear view while the vehicle is in reverse. The driver is totally responsible for the safe operation of the vehicle and the safety of passengers according to their local traffic regulations. Do not use any entertainment features of this system whilst driving.

This product utilizes precision electronic components. Any unauthorized modifications or damage to rearview mirror monitor might result in electric shock. Handle all components with care. Inspect the system regularly paying extra attention to the mount. You must take reasonable care to ensure that the installation of this product does not void or affect the vehicle's safety design and warranty.

Do not apply excessive force to any of the components contained within this kit. Excessive force will damage the system.

Do not connect the power cable of R603A directly to the 24V power. R603 and R603B have a control box to convert the 24V into 12V to power the cameras and monitor.

Do not locate the compass sensor outside of vehicle cabin as it is not water proof. Also avoid locating the compass sensor near any power cables or any electronic devices as this will affect the compass's accuracy.

Avoid locating the temperature gauge near any device which generates heat while operating.

The video input function (R603 & R603B) will only work while the hand brake is on.

⚠ **WARNING: Reversing your vehicle**
Do not reverse your vehicle using only the rear view system. Please always also look in the direction of your vehicle's motion. The rear view system is intended to be used as an aid to reversing safety, so wing mirrors and direct rear view should also be used. Judging distances on the monitor is a learnt skill, so exercise extra caution initially. Please always be aware of other blind spots

Application guide:
The R603 series mirror will fit most original equipment mirror brackets. However some OE brackets won't fit. If it doesn't fit you will need to remove the original button on the windscreen and stick the free button provided by Mobiletron in its place. The R603 will now fit. In some cases, you may need to buy an adapter to fit the bracket of R603 mirror monitor. The application guide below and information are for your reference only. Please always consult the retailer before your purchasing. Mobiletron can't guarantee all the models listed below can be fitted as vehicle specification changes can be made without notice.

1. R603 series mirror monitor can fit to the original button on windscreen: Chrysler, Dodge, Jeep, Chevrolet, Cadillac, GMC, Saturn, Geo, Pontiac, Buick, Oldsmobile and Hummer H1, H2, H3.

2. You may replace the OE button on the windshield with the one included in the kit: Ford, Mitsubishi, Toyota, Jaguar, Suzuki, Isuzu, Infiniti, Mercury, Scion, Mazda, Honda, Nissan and Lexus.

3. You should replace the OE button on windshield with the one included in the kit: Saab, Peugeot, Fiat, Audi, Volvo, Mercedes-Benz, Daewoo, Volkswagen, KIA, Hyundai, Renault and MG.

4. For some Japanese cars you may need to purchase a Camlock Mirror Adapter Kit. Please consult with the local retailer.

3. Installation Instruction

3-1. Contains

Item	R603	R603B	R603A
R603 rearview mirror	1	—	—
R603B rearview mirror	—	1	—
R603A rearview mirror	—		1
Control box	1	1	—
8 pin extension cable (Power line, 1 video input, 1 signal trigger line)	—	—	1
8 pin/D-sub extension cable	1	1	—
Signal cable (with power line)	1	1	—
DC Jack cable	—	—	1
Temperature sensor	1	—	—
Compass sensor	1	—	—
Windshield Mounting set	1	1	1

3-2. Mirror Mounting Instruction

A. Remove the original factory mirror. (Do not use excessive force while removing OE mirror.) Check to make sure that the OE mirror-mount matches the replacement mirror. If it does not match, consult the application guide and see if you need to purchase an additional adapter mount.
B. Slide the receiving bracket on the back of the new mirror onto the windscreen-mounting button. Move the bracket and make sure it totally secure.
C. Tighten the replacement mirror by using T-20 mounting bracket screw.

3-3. Control Box Connection (Apply for R603, R603B)

A. Connect the 8 pin extension cable to the rearview mirror 8 pin cable.
B. Route the cable under the headliner of the windscreen then down to a pillar behind the plastic cover to under the dash area.
C. Connect to the control box by the D-sub connector.

3-4. Installing the Temperature Gauge (Apply for R603)

A. The temperature sensor can detect -40℃ to 125℃(-40℉ to 257℉)
The temperature sensor hasn't got a temperature compensation function.
B. The monitor's temperature depends on the position of the sensor.
C. Avoid locating the temperature sensor near the engine, it might be influenced by the heat.

3-5. Installing the Compass Sensor (Apply only for R603)

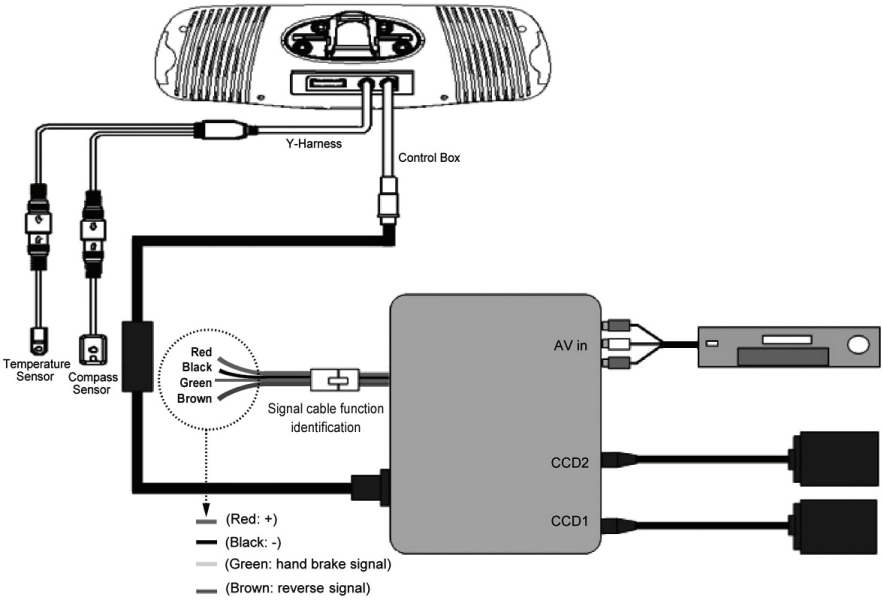
A. Before locating the compass sensor, please make sure the direction corresponds with the display on mirror.
B. Please keep your sensor far away from any magnetic field. It will affect the accuracy.

3-6. System Electrical Connections

A. Applies to R603, R603B

R603/R603B
cable connect system

・If the hand brake is released
A/V input function will not work.

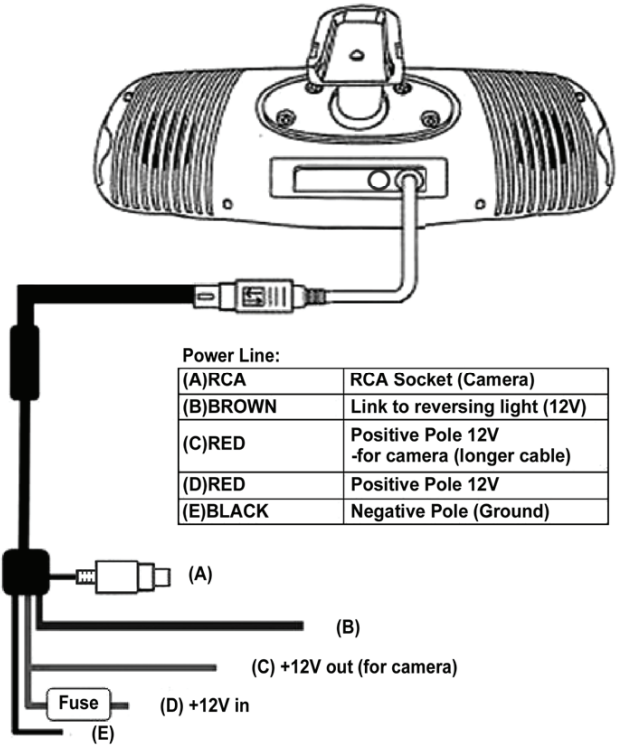


※ Signal connects:

a. Camera signal inputs by 6 pin connect to control box.
b. AV input by RCA connector.
C. Hand brake signal (Green line) must connect to “ground”.
But not all vehicles are designed to ground the circuit when the hand brake is on.

⚠ **Caution: The video input function (R603 & R603B) will only works while the hand brake is pulled. To ensure your driving safety, do not play the video while you are driving.**

B. Applies to R603A



※ Signal connects:
a. Camera signal inputs by 6 pin connect to control box.
b. A/V input by RCA connector.

3-7. Signal Input

All inputs are non mirrored unless the camera itself mirrors the image

Model	R603/R603B	R603A
CAM 1	6 PIN mini-din connector with Audio function	RCA connector without Audio input
CAM 2	6 PIN mini-din connector with Audio function	N/A
AV	RCA connector with Audio/Video input	N/A

4. Operation

4-1. Mirror Monitor Feature

R603 (2 Camera inputs, 1 AV input, Compass/Temperature)

Camera 1 ON/OFF

Camera 2 ON/OFF

Adjustment button

AV ON/OFF

Compass/Temperature ON/OFF/UNIT

R603B (2 Camera inputs, 1 AV input)

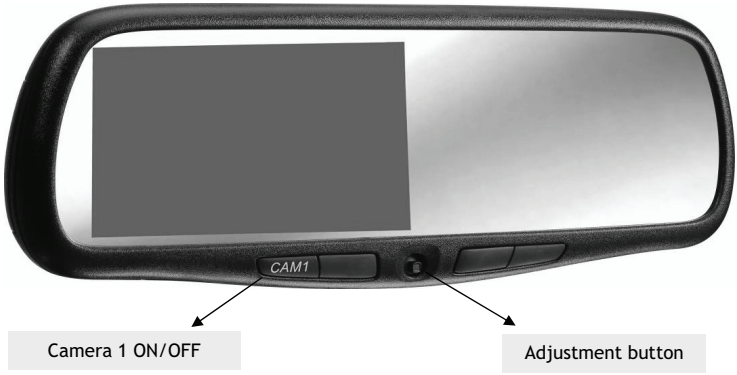
Camera 1 ON/OFF

Camera 2 ON/OFF

Adjustment button

AV ON/OFF

R603A (1 Camera input)



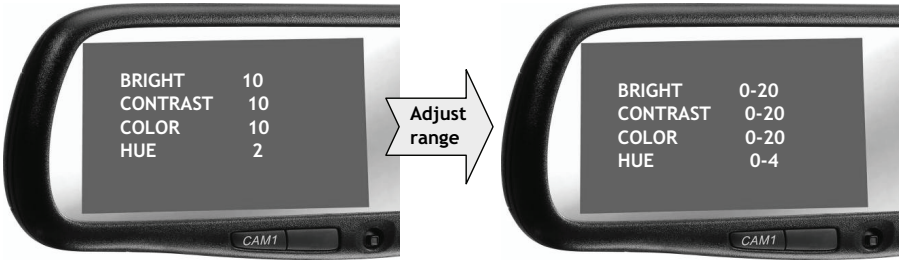
※ Button function:

- Camera 1 ON/OFF: Default reverse gear image display channel.
  No matter which channel is turned on. Camera 1 should be automatically turned on while in reverse gear.
- Camera 2 ON/OFF: Camera 2 image display ON/OFF.
- AV ON/OFF: AV input ON/OFF.
- Compass/Temperature ON/OFF: Compass/Temperature ON/OFF. You might need to select the unit of the temperature initially. The unit which you select will be saved in memory.
- Adjustment button: 5 directions button(Up/Down/Left/Right/Press)
  Up/Down: Select icon with bar mark.
  Left/Right: Adjust icon's working effect level

4-2. General Operation

A. Image quality setting.

- Adjust button "up/down" direction is to select what item you want to adjust.
- Adjust button "left/right" direction is to set the figure of image quality factor.



- If you leave it in setting mode for more then "5 seconds", this value will be automatic saved and it will exit the setting function.
- You can set CAM1/CAM2/AV separately. The settings will be saved independently.

B. Volume adjustment
- Pushing the adjustment button “left/right” direction to change the volume of speaker.
- R603A is no volume adjusted function.

C. The CAM1/CAM2/AV default is off. While you are in reverse gear the monitor will be automatically switch to CAM1 no matter CAM2 or AV is working. CAM 1 is defaulted for rear view camera.
D. For safety reasons, the AV display function only works whilst the hand brake is on. If you release the hand break, the AV function will revert to sound only.

4-3. Maintenance

Although your mirror monitor requires little in the way of maintenance, it should be cleaned regularly. Follow the simple rules below to extend the working life of the system.
- Keep your system away from excessive humidity, heat, cold and any magnetic field.
- Keep liquid away from monitor and mirror body.
- To avoid mirror fixing damage, do not put excess load on the mount by hanging heavy objects from it.
- Occasionally clean the surface of the mirror using window cleaner.

5. Troubleshooting

Situation	Solution
The mirror monitor doesn’t power on after the car is started.	**1. Check the installation cable diagram.** **2. Ensure the power line is well connected to the control box.** **3. Check that there is 12 volts on the power cable while the ignition on.**
No video signal appears when reverse gear selected.	**1. Check the rearview camera, cable, and connector.** **2. Check the cable from rearview mirror is well connected to the control box.** **3. Check your wiring matches that of the wiring diagram.**
Video image is not sharp enough.	**Please check the lens of camera.**
Compass direction is not accurate(R603).	**1. Calibrate the system. Please contact technical support.** **2. Check the sensor isn’t close to speakers or other strong magnetic fields.**
Temperature/Compass display does not change when T/C button is pressed.	**Make sure the button is not damaged by excessive force.**
Excessive speaker noise.	**Turn volume down or off.**

6. Specification

Model		R603	R603B	R603A
TFT-LCD		4.3 inch		
View angle		Up:50 / Down:60 / Left&Right:60		
Brightness		400		
Resolution		480*272		
Aspect Ration		16:09		
TV system		PAL/NTSC RGB Video Sync		
Contrast Ratio		250:1		
Response Time		40ms		
Temperature/Compass		●	—	—
Control Box Connector		Audio/Video RCA input*1, CCD Min-Din input*2		—
Power Consume		6W(MAX)		
Speaker		Built-in 2 speakers output power: 1W		—
Weight	Rear mirror monitor	350g		
	Control box	130g		—
Dimension	Rear mirror monitor	275mm*96mm*23.5mm (Length*width*high)		
	Control box	102 mm*64.5 mm*36 mm		—
Language		English		
Function key	CCD1	NTSC/PAL: Brightness, Contrast, Color, Hue(NTSC) Parking assistant line lest/right adjust, Mirror/Non-mirror function		
	CCD2	NTSC/PAL: Brightness, Contrast, Color, Hue(NTSC)		—
	AV	Brightness, Contrast, Color, Hue, Volume		—
Storage temperature		-20℃~70℃/-4℉~158℉		
Operation temperature		-10℃~60℃/14℉~140℉		

7. Warranty

Mobiletron, hereby warrants that this Mobiletron Mirror monitor system shall be free from material defects in workmanship and/or materials until the expiry of twelve months from its purchase by the end user, EXCEPT WHERE any such defect has been caused by: Improper or non-normal use, Improper installation, contacts with any corrosive or otherwise harmful substance, any other acts or omission not sanctioned by the User Manual.

- Mobiletron warrants the rearview mirror system product for twelve months from the end user purchase date under normal operation condition, which is free from manual improper operation, improper installation or any casualty.
- Mobiletron's sole obligation shall be to repair or replace the defective product at no charge to the original owner.
- Mobiletron warns the user or driver of the driving safety by the limited warning signal range, and does not protect or take the responsibility of the user's or driver's safety directly.
- In no event will Mobiletron be liable for any direct, indirect, special, incidental or consequential damage, including loss of profit, loss of savings, or any other damages caused by product, or its documentation, or failure of the product to perform, even if Mobiletron has been advised of the possibility of such damages.

1. Warranty Service

1> The above warranty will be honored by the retailer from which it was purchased, provided that the owner can provide dated proof of purchase.

2> In the event that any defect in the unit is covered by the above warranty, Mobiletron will replace the affected components free of charge, shipping prepaid. The owner shall be responsible for any labor and installation costs incurred in removing the defective parts and/or installing the replacement.

3> The retailer shall at Mobiletron' cost send any unit which is defective as described in the above warranty to Mobiletron at No.39, Sec 3, Chung-Ching Rd., Ta-Ya, Taichung Hsien, Taiwan 428.

2. This Limited Warranty Provided by Mobiletron Does Not Cover:

1> Product that have been subjected to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, improper transportation, repair or service in any way that is not authorized by Mobiletron.

2> Any damage attributable to fire, flood, lightning strike or act of God.

3> This limited warranty coverage will exclude the package material and user manual.

4> The damage caused from benzene, alcohol or any corrosive cleaner.

5> Any repair should implement in Mobiletron by returning from the Mobiletron

6> Authorised retailer. Any repair without authorization will be excluded from the warranty.

Mobiletron Electronics Warranty card

Product name	☐ R603	☐R603B	☐R603A
Series number			
Customer information	Name:		
	Telephone:		
	Address:		
Purchasing date	/ / (mm/dd/yy)		

Distributed by:

Please have your retailer stamp or sign in the column.

Manufacture by Mobiletron Electronics Co., Ltd.
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